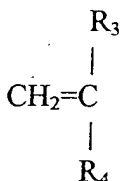
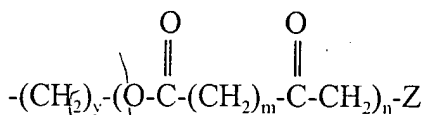


1. (Amended) In a liquid artificial nail composition comprised of one or more addition-polymerizable, ethylenically unsaturated monomers, which, when applied to the nail polymerize thereon to form an artificial nail structure having a thickness of greater than 10 mils, the improvement wherein the composition also contains a monoethylenically unsaturated vinyl monomer [that contains two or more carbonyl groups] having the general formula:



wherein R_3 is H, a C_{1-30} straight or branched chain alkyl, aryl, aralkyl, and

R_4 is $-A-X-(O-C(=O)-(CH_2)_m-C(=O)-CH_2)_n-Z$, or

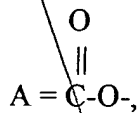
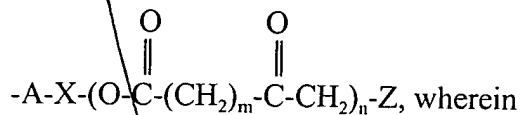


wherein $A = -C(=O)-O-$, or $O-C(=O)-$, $X = C_{1-30}$ straight or branched chain alkyl, m is 1 to 5, n is 1 to 30, y is 0 to 50; and $Z = H$ or a C_{1-30} straight or branched chain alkyl.

2. Cancel.

RECEIVED
JUL 13 2000
TECH. SERV.

C2 3. (Amended) The composition of claim [2] 1 wherein R₃ is H or a C₁₋₈ alkyl, and R₄ is



X = C₁₋₅ alkylene

m = 1-5,

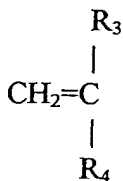
n = 1-5, and

Z = C₁₋₁₀ straight chain alkyl.

C3 5. (Amended) The composition of claim 4 wherein [multicarbonyl-vinyl containing] monomer is acetoacetoxyethyl methacrylate.

6. (Amended) The composition of claim [2] 1 additionally comprising at least one other ethylenically unsaturated monomer.

C4 25. (Amended) In a liquid artificial nail composition comprised of one or more ethylenically unsaturated monomers which are esters of acrylic or methacrylic acid and an aliphatic alcohol or ether-alcohol, which composition, when applied to the nail polymerizes thereon to form an artificial nail structure having a thickness of greater than 10 mils, the improvement wherein the composition also contains a monoethylenically unsaturated vinyl monomer [that contains two or more carbonyl groups] having the general formula:



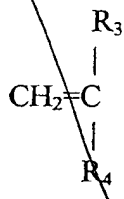
wherein R_3 is H, a C_{1-30} straight or branched chain alkyl, aryl, aralkyl; and

R_4 is $-A-X-(O-\overset{\overset{O}{\parallel}}{C}-(CH_2)_m-\overset{\overset{O}{\parallel}}{C}-CH_2)_n-Z$, or

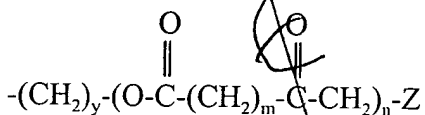
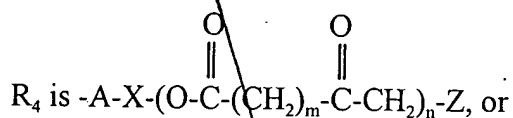
$-(CH_2)_y-(O-\overset{\overset{O}{\parallel}}{C}-(CH_2)_m-\overset{\overset{O}{\parallel}}{C}-CH_2)_n-Z$

wherein $A = -\overset{\overset{O}{\parallel}}{C}-O-$, or $O-\overset{\overset{O}{\parallel}}{C}-$, $X = C_{1-30}$ straight or branched chain alkyl, m is 1 to 5, n is 1 to 30, y is 0 to 50; and $Z = H$ or a C_{1-30} straight or branched chain alkyl.

26. (Amended) A polymerized artificial nail structure having a thickness of about 10-60 mils, and a modulus of elasticity of about 550-800 N/m², comprising a copolymer of at least one ethylenically unsaturated monomer and a multicarbonyl vinyl-containing monomer having the general formula:

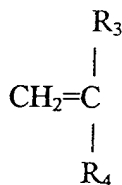


wherein R_3 is H, a C_{1-30} straight or branched chain alkyl, aryl, aralkyl; and

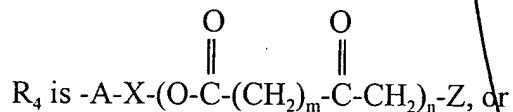


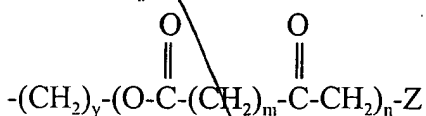
wherein $A = -\overset{\overset{O}{\parallel}}{C}-O-$, or $O-\overset{\overset{O}{\parallel}}{C}-$, $X = C_{1-30}$ straight or branched chain alkyl, m is 1 to 5, n is 1 to 30, y is 0 to 50; and $Z = H$ or a C_{1-30} straight or branched chain alkyl.

27. (Amended) A method for reducing, ameliorating, or eliminating delamination of an artificial nail structure from the natural nail surface, wherein said artificial nail structure is obtained by polymerizing on the natural nail surface a polymerizable monomer composition, comprising adding to said polymerizable monomer composition an effective amount of at least one multicarbonyl-vinyl containing monomer having the general formula:



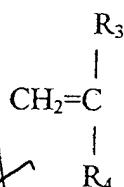
wherein R_3 is H, a C_{1-30} straight or branched chain alkyl, aryl, aralkyl; and





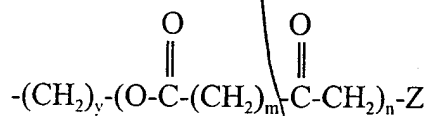
wherein A = $-\overset{\overset{O}{\parallel}}{C}-O-$, or $O-\overset{\overset{O}{\parallel}}{C}-$, X = C₁₋₃₀ straight or branched chain alkyl, m is 1 to 5, n is 1 to 30, y is 0 to 50; and Z = H or a C₁₋₃₀ straight or branched chain alkyl.

28. (Amended) A method for improving adhesion of an artificial nail structure to the nail surface, wherein the artificial nail structure has been applied by polymerizing on the nail surface a polymerizable monomer composition, comprising adding to said polymerizable monomer composition an effective amount of at least one multicarbonyl-vinyl containing monomer having the general formula:



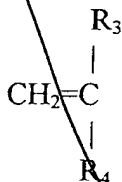
wherein R₃ is H, a C₁₋₃₀ straight or branched chain alkyl, aryl, aralkyl; and

R₄ is $-A-X-(O-\overset{\overset{O}{\parallel}}{C}-(CH_2)_m-\overset{\overset{O}{\parallel}}{C}-CH_2)_n-Z$, or



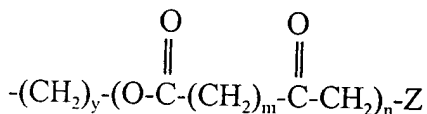
wherein A = $\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{O}- \end{array}$ or $\begin{array}{c} \text{O} \\ \parallel \\ \text{O}-\text{C}- \end{array}$, X = C₁₋₃₀ straight or branched chain alkyl, m is 1 to 5, n is 1 to 30, y is 0 to 50; and Z = H or a C₁₋₃₀ straight or branched chain alkyl.

29. (Amended) A method for reducing premature gelation of a liquid monomer composition containing at least one ethylenically unsaturated monomer, comprising adding to said composition an effective amount of at least one multicarbonyl-vinyl containing monomer having the general formula:



wherein R₃ is H, a C₁₋₃₀ straight or branched chain alkyl, aryl, aralkyl; and

R₄ is $\begin{array}{c} \text{O} \quad \text{O} \\ \parallel \quad \parallel \\ -\text{A}-\text{X}-(\text{O}-\text{C}-(\text{CH}_2)_m-\text{C}-\text{CH}_2)_n-\text{Z}, \text{ or} \end{array}$



wherein A = $\begin{array}{c} \text{O} \\ \parallel \\ -\text{C}-\text{O}- \end{array}$ or $\begin{array}{c} \text{O} \\ \parallel \\ \text{O}-\text{C}- \end{array}$, X = C₁₋₃₀ straight or branched chain alkyl, m is 1 to 5, n is 1 to 30, y is 0 to 50; and Z = H or a C₁₋₃₀ straight or branched chain alkyl.